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NOVEMBER-DECEMBER 1981
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Holiday Issue

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FAA GENERAL AVIATION NEWS

DEPARTMENT OF TRANSPORTATION/ FEDERAL AVIATION ADMINISTRATION

NOVEMBER-DECEMBER 1981
Volume 20, Number 6

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REMOTE ELT TEST. The National Transportation Safety Board has determined that loss of life in a survivable accident near Michigan City, IN last year (see p. 7) might have been prevented if the ELT had been armed. FAA has issued a general notice cautioning users of all models of this ELT (Rockwell CIR-11) that a radio signal caused by the remote test switch does not assure that the ELT is armed.(A visual check is essential.) An updated owner's manual with additional information on the remote switch function is available from Rockwell International, 3000 Airway Ave., Costa Mesa, CA, 92626, (714) 540-7640. Ask for Document No. 950012, dated March 20, 1981.

DEFLATION. Owners of Raven balloons with the "rip" style deflation system, take note: FAA Airworthiness Directive 82-21-02, effective October 13, 1981, requires the pilot to check the deflator prior to each flight by applying 20 lbs. of pull—as indicated by a spring scale—to the hook and loop fastener to assure that gentle pressures or turbulence will not cause the balloon to accidentally deflate at altitude. An entry must be made in the aircraft logbook indicating compliance.

MAINE CAUTION. Santa or any other airman flying in the northeast, beware. The Air Force is operating an experimental radar system in Maine through December 1981. The radar transmits between 6.75 and 21.85 MHz, which could trigger electro-explosive devices and may damage aircraft high frequency radios. Avoid the antenna site (near Moscow, ME) by not flying below 6,500' MSL or within two miles of the area. Refer to NOTAMs or local FSS for further details.

TRIPLE BYPASS. A new Victor Airway to bypass busy New York Center traffic became effective November 26, 1981. V-419 from LaGuardia to Westchester, NY then to Westminster, PA and points south will be used to route IFR traffic west of the three major New York airports whenever delays are expected to be 30 minutes or more. Consult NOTAMs for the route and associated NAVAIDs, pending alteration of en route charts.

X-RAYS MARK THE SPOT. Company maintenance inspectors overlooked a fatigue crack, discernible in an X-ray photo, in the aft bulkhead of a DC-9. Four months later, on a trip from Boston to Nova Scotia, the bulkhead ruptured, causing separation of the tail cone, rapid decompression at 25,000', injuries to a flight attendant, and some scary moments for the 40 passengers before a safe landing was made.

THE GENERAL AVIATION RESERVATION RULE

(Asterisk indicates a change since the rule became effective on October 19, 1981. Pilots will be advised of later changes by NOTAMs.)

1. All aircraft operators planning a flight under IFR with a proposed departure or en route pick-up time from 0600 LCL to 1959 LCL shall file a flight plan with and obtain a departure or en route pick-up reservation from an FAA Flight Service Station at least 30 minutes, but not more than 24 hours, before the proposed departure or en route time *if any segment of the flight will enter ARTCC (Center controlled) airspace.*
2. An Air Traffic clearance must be requested not later than 30 minutes after the proposed departure or en route pick-up time, or the reservation is automatically cancelled.
3. Multiple-Leg Flight Plans may be filed provided—
   A. The conditions of paragraph 1, above, are met.
   *B. The last proposed departure or en route pick-up time does not exceed the 24-hour filing time limitation specified in paragraph 1, above.
   C. The same departure or en route pick-up point is not specified twice in the request.
   D. The request does not involve more than three departure or en route pick-up points.
4. Limitations on obtaining an IFR clearance while airborne remain in effect in the Anchorage ARTCC area as specified in the pertinent regulatory NOTAM.

WHO MUST COMPLY: All pilots except those engaged in—

- FAR Part 121 or Part 135 operations with FAA/ICAO approved two-letter and three-letter call signs.
- Military flights.
- Medical emergency flights.
- Presidential or Vice-Presidential flights.
- FAA critical flights.
- Operations at the those major airports which currently require reservations under FAR Part 93 Subpart K (JFK and LaGuardia in New York, Chicago O'Hare and Washington National). The previously existing system will continue to be followed and none of the requirements under paragraphs 1, 2, and 3 below need apply. Some occasional adjustment of the existing time slots may take place.
- Flights originating within the airspace areas of Anchorage and Honolulu Air Route Traffic Control Centers.
- Turbojet aircraft operations at FL290 and above.
- Nonstop flights destined for airports outside the continental United States.

Reservations, Please

Emergency Rule Requires Scheduling of IFR Flight Plans

By emergency regulation, general aviation instrument flight plans for operations in the en route environment, between 6:00 a.m. and 7:59 p.m. are now being accepted only by reservation and limited in number according to the predictable workload of the air traffic system. Turbo jets operating at FL 290 and above are excepted.

This general aviation reservation program, known as GAR, is a direct consequence of the illegal PATCO strike on August 3, which led to the discharge of some 11,000 air traffic employees, including about 9,500 journeyman controllers (fully qualified in all positions). That left the agency with approximately 5,000 journeyman controllers.

Nevertheless, the air traffic system has been able to keep people and goods moving at a near-normal rate throughout the initial recovery period. At a few of the very busiest airports, air carrier schedules were reduced somewhat but elsewhere traffic flow was relatively unimpeded. This was made possible by careful advance planning; the dedication of nonstriking and supervisory personnel; the assistance of some 800 military controllers and about 200 reactivated FAA controller retirees; and innumerable other individuals in the agency who contributed support.

An equally important factor has been the rebirth of the courteous and cooperative spirit among pilots and controllers which characterized the earlier days of flying.

Furthermore, in the first three months following the strike it was possible to increase capacity at some of the busiest control towers by transferring controllers out of less active towers. As a result, some less busy towers are now operating fewer hours per day or week, and some have been, or will be, closed temporarily.

The 20 en route air traffic Centers in the 48 adjacent states, which control the long distance travel of thousands of flights daily, are in an entirely different situation. Their constant workload makes it out of the question to consider reducing service hours, or temporary closings. Therefore the capability of the Centers to handle traffic has to be the limiting acceptance factor, over the estimated two years required to restore the air traffic control system to near-normal capacity.

Some relief is being afforded to the Centers by offloading certain functions to the towers and flight service stations wherever practical. This includes transferring some airspace and funneling appropriate traffic through en route portions of the airspace which can be controlled by towers instead of Centers.

However, these measures do not suffice to prevent traffic demand from exceeding capacity at peak hours, especially with the onset of winter. Winter storms can reduce airport ability to accommodate aircraft, and this in turn increases the workload for air traffic control, and the potential for inflight delays. In order to assure a balanced safe flow of IFR traffic at near-maximum capacity, FAA has established GAR, the general aviation reservation program outlined above and explained by letter to all instrument rated pilots. (For complete details and updates check FSSs for National Flight Data Center NOTAMs, especially 2760 and 2775.)

Prior to August 3, general aviation accounted for approximately 38–39 percent of the IFR traffic, while air carriers made up 45 percent and about 17 percent went to the military. By October 19 general aviation IFR had risen to 43 percent. By November 2, two weeks after the inauguration of GAR, general aviation IFR had dropped back close to pre-strike figures. In this same two-week period the number and length of air and ground delays was reduced appreciably. With modifications, GAR will remain in effect only as long as required.

Meanwhile, at the FAA Academy in Oklahoma City, the hiring and training of new controllers is preceding at a rapid pace. In the future the air traffic workforce may be restructured into three distinct categories (flight data specialists, radar controllers, and non-radar controllers) so that specialized experience and advancement can be acquired more rapidly. Additionally, a number of changes are to be made in the air traffic system that will enable it to function more effectively and with fewer personnel than in the past. However, some restrictions, in decreasing degrees, will probably remain in effect over the next two or three years.

For IFR pilots this will mean occasional delays in departures, but delays on the ground are considerably less expensive or inconvenient than delays in the air. For VFR pilots GAR will call for greater vigilance than ever in watching for other aircraft in flight, and more wisdom and patience in flight planning, since flight service stations will be carrying a greater workload.

No one is asked to stop flying. ■

WATERFRONT AIRPORTS

Lessons to be learned from Meigs Field

Even before it was constructed, Chicago's Meigs Airport was a problem for the city government. As early as 1911 the city had wanted a lakefront site for its official metropolitan airport, but for 35 years planners could not decide where to put it. Runways were laid out at several locations, but later abandoned. There just was not enough open space left. Finally they settled on Northerly Island, a 75 acre man-made mud pile built in 1933 for the Century of Progress Exposition, just about midway along the 30 mile stretch of the city's lake frontage. Merril C. Meigs Airport was opened officially in 1948. By this time Chicago already had two flourishing commercial airports—Midway on the eastside and mushrooming O'Hare in the western suburbs.

So now Chicago also had a downtown waterfront airport, but the question was—what for? The single north/south runway, originally 2,800' and now 3,947', made it inaccessible to contemporary air carriers, and general aviation activity alone hardly seemed to justify the expense of construction and upkeep, especially since the proximity of skyscrapers on one side and a large expanse of water on the other made the airport eventually unsuitable for student flight training.

But in time Meigs found its niche in the aviation scene, as operators of air taxis, commuter, corporate aircraft and business jets, as well as local general aviation airmen, came to appreciate the advantages of its location, only a few minutes from downtown Chicago, and away from the ever increasing air traffic congestion on the west side. Over the next 30 years the airport prospered modestly but steadily, although it continued to be regarded as a "mistake" in the minds of some local leaders, who wanted to use the hard-to-come-by lakeside acreage for civic purposes of a broader nature.

Sentiment in favor of closing the airport crystalized in 1978 following a much publicized fatal accident in which four persons lost their lives when a privately owned Cessna 210 crashed into the lake. A comparative study of accidents

at Meigs and two other general aviation airports in the Chicago area—Pal-waukee to the north and DuPage to the west—seemed to support the contention that the waterfront airport was unsafe.

In the decade from 1968 to 1977, according to National Transportation Safety Board statistics, there were 32 accidents at Meigs, accounting for 21 fatalities in 10 fatal accidents. In the same time period Pal-Waukee had more accidents (39) but only five fatalities in four fatal accidents. Likewise, DuPage had 27 accidents, six fatal accidents, and 23 fatalities.

However, both DuPage and Pal-Waukee control towers handled an average of over 200,000 operations a year over this period, while Meigs had only about 75,000 annually—which made its accident-per-operation rate much higher. Meigs averaged about one accident for every 2,300 operations. Comparable figures for Pal-Waukee were roughly 1/5,400 and for DuPage 1/8,000.

Do these figures really show that a city waterfront airport is less safe than a landlocked field? Is Meigs literally the "most dangerous airfield for small planes . . ." as some have charged? Not necessarily. According to FAA observers in the Great Lakes Region, one frequently overlooked factor is that Meigs Field is an important safety valve for the hundreds of aircraft that fly across Lake Michigan daily in the direction of Chicago or points west. In the event of an inflight emergency Meigs offers the only available emergency landing strip for dozens of miles. Some of the aircraft accidents charged to Meigs have involved aircraft which neither departed from nor were flying into this airport but made forced landings here in order to avoid a far more hazardous encounter with "the Rocks" (built up area of Chicago) or the "soft place" (the lake).

The remainder of the accidents fall into two categories: local or frequent itinerant flying; and infrequent itinerant flying. Like other big-city waterfront airports, Meigs has certain environmental conditions which could be a problem for pilots who are not prepared to cope with them or who do not deal with them often enough to develop appropriate techniques. These conditions include:

- spatial disorientation (over water)
- unpredictable windshifts
- abrupt changes in weather
- slippery or obscured runways
- birdstrike hazards

Spatial disorientation probably occurs more often near a waterfront airport than elsewhere because of the greater likelihood of losing sight of the horizon—not only at night but also under various daytime conditions of obscured or marginally VFR weather. The unwary pilot will either reference himself to an erroneously conceived horizon, or encounter complete frustration in attempting to determine his spatial orientation. The reflection of stars in the water may give him the impression he has become inverted, especially if the problem occurs while he is in a turn that is steep and persistent enough to affect the fluid in the semi-circular canals of the ear, which normally provide a sense of balance. Taking off into a bright sun, with considerable reflection over the water, may also bring about disorientation. Similarly, abruptly turning toward the glare of city lights along a shoreline, when landing after a long overwater flight in darkness, can cause the problem.

Spatial disorientation is by no means "purely mental." It can also bring about feelings of dizziness, nausea, headache, etc. The phenomenon can strike at experienced airmen as well as at beginners. In one case on record a formation of three U.S. Air Force pilots departed a base near Myrtle Beach, S.C., on a night mission. As the three aircraft were flying in a turn, still at a low altitude over the water, the leader of the formation looked behind him to adjust a switch and apparently became disoriented when he turned around again. He flew the jet directly into the water—and was followed by the other two aircraft. No one was ever recovered.

In the Cessna 210 accident at Meigs Field mentioned earlier, resulting in four fatalities, the flight had originated on November 4 in Los Angeles, with en route stops at Farmington, NM, Pueblo, CO, and Des Moines, IA. The four persons on board were flying around the country in their *Centurion* to inspect various installations of kitchen equipment manufactured by their company. After spending November 5 in the Chicago environs, they returned to Meigs Field to plan the last leg of their trip, a flight to Jackson in south central Michigan.

Light rain showers had moved through the area during the day but by nightfall weather conditions were VFR. A weather briefing obtained by the pilot indicated the ceiling at Meigs was 8,000 scattered, 15,000 overcast, visibility seven miles. However, VFR flight over the lake at night was not recommended because scattered rain showers were forecast along the route to Jackson, with possible IFR conditions. The other occupants of the *Centurion* were in favor of remaining overnight in Chicago and catching up on some rest, but the pilot, who had napped

Meigs Field (left), Chicago's lakefront airport, parallels downtown cluster of skyscrapers. Contrast of city's bright lights and dark lake area contributed to disorientation of visiting airmen, like pilot of Centurion (above) who crashed into the water in 1978.

intermittently during the day while being driven to meetings, decided to take off. Apparently he planned to follow the shoreline route around the lake rather than overfly it.

The pilot's unfamiliarity with the airport was evidenced by his request to the tower for pattern direction information prior to taxiing. The time was 6:45 p.m. and the night, under the overcast sky, was quite dark. The pilot was advised that a righthand pattern was in effect for this departure which would be from runway 36. A pilot sitting in the lefthand seat and taking off on 36 would see the brilliantly illuminated downtown waterfront of Chicago to his left, and only darkness to his right.

The takeoff was apparently normal and the right turn accomplished at about 500 feet. However, the aircraft did not continue to climb but descended in a cruise configuration and struck the water at an angle of approximately 20 degrees. All four on board perished before a rescue vessel could reach the wreckage.

Statements from pilot witnesses of the accident indicated the *Centurion* had been flown under control directly into the water—and this impression was supported by evidence from the aircraft, which was salvaged from the lake and disclosed no sign of pre-crash mechanical failure. Investigators concluded that while turning away from the bright lights of the waterfront toward the pitch dark lake area the pilot had lost his visual references and suffered spatial disorientation.

Spatial disorientation on takeoffs or landings can usually be avoided by anticipating loss of ground reference, inspite of VFR conditions, and utilizing appropriate panel instruments to stabilize the aircraft in the desired attitude. Even the most rudimentary type of instrument, such as the altimeter, will suffice to tell the pilot whether he is descending, climbing or holding altitude. Yet pilots who had hundreds of hours of flight time, but were fixed in the habit of using visual references, have ignored the instrument under circumstances when the horizon was indistinct—and paid for the error with their lives.

Depending upon visual references as a primary source of information at all times is a very natural tendency, but one that can be overcome by instrument training. *Night flights over water, like other flights in conditions of obscured horizons, are not recommended for a pilot who is not instrument rated and current.*

Unpredictable windshifts are a common feature of airports which are exposed to a broad sweep of open water. The minimal resistance of the flat lake surface allows the wind to move around to varying points of the compass with very little warning, resulting in frequent—although usually minor—landing accidents. These can be avoided by careful vigilence and sensitivity on the part of the pilot throughout his approach and landing. Bear in mind that these types of windshifts could affect the aircraft before they are recorded by airport or control tower instrumentation, so never assume that the wind you encounter will correspond exactly with the terminal weather report.

At some of these peninsular airports, such as Meigs Field, there is a single runway which conforms necessarily to the land shape but is not necessarily aligned with prevailing winds—and in any case offers no alternative when the crosswind component exceeds the aircraft limitation or the pilot's ability.

On July 27, 1973 a Piper 23 *Apache* carrying three passengers and flown by a low-time pilot unskilled in severe crosswind conditions, attempted to land at Meigs Field on runway 18. The weather was VFR but the wind was from 250° at 15 knots, gusting to 28. This presented the pilot of the approaching light twin with a 70° crosswind. The runway is 150 feet wide, with lake water on either side 75 feet away. The airplane made a slightly high approach but seemed to be aligned with the runway. When the aircraft leveled off and touched down, it bounced high in the air and before the surprised pilot could apply corrective measures he was blown far to the left of the runway and over water. The pilot made a belated effort to go-around, but just as he added full power, the *Apache* settled into the water and sank. One passenger died. The pilot's inability to cope with the gusting crosswind was cited as the probable cause of the accident.

Some inexperienced pilots tend to freeze on the controls when they line up with the runway, instead of remaining flexible enough to make the continuous adjustments of flight controls demanded by a shifting or gusty wind. Make sure your crosswind technique is up to the mark before you attempt to touch down on a narrow spit of land surrounded by water.

Abrupt weather changes are likely at a waterfront airport because of the everpresent moisture supply—which also tends to produce slippery runways and poor braking or directional control problems. Fog or low-lying clouds are likely to materialize almost instantaneously as a result of a sudden drop of two or three degrees in the air temperature. At times low ceilings over water appear to blend in with the surface in such a manner as to disorient the pilot even when he is executing relatively simple maneuvers.

One of the recent weather-related accidents at Meigs Field occurred when a Cessna *Skymaster* (push-pull twin) attempted a very short flight to Midway/Chicago, about eight miles to the southwest. At the time of takeoff the ceiling had dropped to 500 feet and the visibility to ¼ mile. Shortly after departure the pilot, who was instrument-rated but had only 8.8 hours of actual instrument time, lost control of the aircraft. The twin plunged into the lake, resulting in the death of the two persons on board.

Departures under conditions of low ceilings and restricted visibility, at airports where virtually all distinguishing landmarks can disappear immediately upon takeoff, can produce spatial disorientation in even the most experienced of pilots. Accidents of this type can be avoided by imposing a more conservative limitation on the weather minimums you will accept for takeoff at waterfront airports. Although there is no required limitation for Part 91 aviation, observe that air carrier takeoffs (for aircraft with no more than two engines) are not permitted when the visibility is less than one mile.

Bird strikes are always a possibility at waterfront airports, especially during the migratory periods of waterfowl. Information about migratory birds may be available as NOTAMS, or noted in FAA's Airport Facility Directory, or provided as controller advisories. Although airport management may install various devices to scare away birds, these are not always successful. Bird strike damage is normally not so severe as to prevent the aircraft from being landed in a survivable manner, but a panicky reaction to the unexpected strike, plus an apparent fear of the consequences of a controlled ditching, has contributed to a number of fatal accidents.

In the Spring of 1977 an *Aero Commander* with a two-man crew and two company executives on board encountered a flock of seagulls at Meigs during the takeoff roll, damaging one engine. The pilot continued the takeoff, lifted off and attempted to turn back to the airport on one engine, with gear and flaps still extended. In this configuration the *Commander* stalled in a steep turn at low altitude and crashed into the lake, killing all on board. The pilot's performance and decisions were cited as the probable cause of the accident.

The pilot had been cautioned by the tower

about birds on the runway. Under these circumstances a pilot should consider in advance what he will do in the event of a bird strike at various points of the takeoff and at various airspeeds. Unappealing as a watery landing may be, it may be far safer from the point of view of survivability than an attempt to maneuver at minimum control speed or less.

The hazards of a water landing can be reduced if the pilot makes adequate preparations for this possibility whenever he plans to operate at a waterfront airport. Two factors that will increase survivability chances immeasurably are a functioning Emergency Locator Transmitter (ELT) and easily accessible flotation gear on board. The pilot should make certain, before taking off or approaching to land, that his ELT not only has a viable battery but is properly armed—some models will test positively even when they are not armed, which gives you no protection at all in the event of a crash.

An inadvertently un-armed ELT was a primary cause for a tragic delay in the rescue of four persons from a Beech E-90 that went down into Lake Michigan last December. The twin Beech was en route in the late afternoon from O'Hare Airport to Michigan City, IN, on an IFR flight plan. A mechanical failure with the elevator controls, during the ILS approach to Michigan City, resulted in a ditching two miles off shore. Although four persons on board apparently survived the impact, none were rescued alive. Rescue efforts were hampered by lack of an emergency signal from the unarmed ELT, and the plane sank before it could be located by the Coast Guard. The wreckage was not found until three and a half days later. A medical examination of the only two bodies that were found indicated death was due to hypothermia.

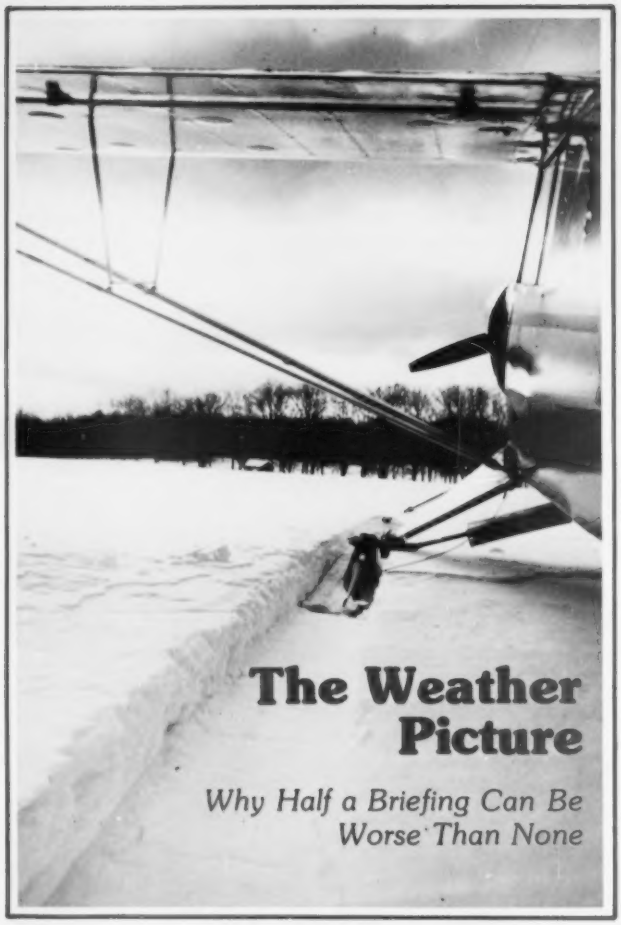
The unfortunate accident points up the value of the life raft, as well as life vests, as protection against water immersion. Prolonged exposure to water can lead to hypothermia even in the warmest latitudes of the United States.

Airman education, rather than closing Meigs Field, was advocated by FAA's Great Lakes Region as the best means of reducing aircraft accidents at the Chicago lakefront, and the efforts of the agency's Accident Prevention Specialists in the area appear to be paying off. Over the four years since the branding of Meigs as unsafe in 1978, the accident toll was reduced from three per year to one per year—even though accidents at nearby DuPage and Pal-Waukee increased over this period. These statistics are not conclusive—and from FAA's viewpoint need to be further improved—but they do seem to dispell the notion that small waterfront airports near large cities are inherently dangerous.

Not if you know what you are doing. ■

Four things to be alert for at waterfront airports: spacial disorientation and loss of horizon (upper left) . . . rapid changes in the weather, especially low clouds and fog (upper right) . . .

. . . flocks of waterfowl that may be acclimated to aircraft noise (lower left) . . . gusty variable crosswinds that may exceed airplane—and pilot—capability (lower right).



The Weather Picture

Why Half a Briefing Can Be Worse Than None

"Over the river and through the woods" to get to Grandma's house on a snowy Christmas Eve is no problem for "the horse that knows the way to carry the sleigh." It is not, however, the ideal route for an airplane full of people, as a North Carolina pilot found out the hard way on December 24, 1980.

The pilot, a 41-year old retail store owner from Rutherfordton, NC, and a newly certificated private pilot, wanted to take his family to spend Christmas with close relatives at Crossville, TN on the far side of the Appalachians, but he had a problem. He would have to keep his store open until at least midday on December 24 for the expected last minute shopping rush. But as a member of his local flying club he had access to the club's aircraft, a Piper *Saratoga*, which seemed to solve their transportation problem. Crossville was six hours away at best by car, but less than two hours in the plane, even with a dogleg around the mountains.

He planned to depart Rutherford County Airport at 3 p.m., fly almost due west to Sugarloaf VOR, then southwest to Toccoa (SC) VOR on the 232° radial. From Toccoa he would home in on the Harris (GA) VOR and from Harris he would fly direct to Crossville, outbound on the 315° radial. Plain and simple flying over open terrain.

On the morning of December 24, at about 9 a.m. he called the FSS, gave the briefer his intended route and estimated time of departure, stating he wanted to get to Crossville before dark. He requested the area forecast and the terminal weather and forecast for Crossville.

The area forecast for the tri-state area of North and South Carolina and Tennessee—issued at 0800 local time and valid for 18 hours—was: clouds generally 10,000 to 12,000 scattered variable to broken, visibility unrestricted. The outlook was for VFR conditions throughout the forecast period. The 0800 weather in Crossville was 10,000 scattered, visibility 15 miles, temperature 45° F. The forecast called for VFR conditions to prevail the rest of the day there. Knoxville (54 miles east of Crossville) was also reporting and forecasting VFR for the day.

Happy that the prospects for making the trip were optimistic, the pilot finalized plans to depart shortly after noon with his wife and two daughters. However, an unexpected last-minute busy shopping rush in his store made difficult to close as early as he had hoped. At 3 p.m. he called the FSS back to see if he could still make the trip later in the day.

Pilot: *One three niner foxtrot requesting current weather at Crossville, TN.*

FSS: *Okay, one second. Let's see, Crossville is reporting 12,000 scattered, estimated ceiling 15,000 overcast, visibility 12 miles, winds 300 at 10, temperature 36, on the hour.*

Pilot: *What have you got for Harris, GA?*

FSS: *I haven't got theirs up yet—no, sir, that's not available. There's no station.*

Pilot: *Well, what about Franklin or Macon County?*

FSS: *No station there either. Are you planning to fly over the mountains?*

Pilot: *Well, no, I was thinking of sticking to Victor 54, but I just wondered if there was anything going on up in those hills around Macon . . .*

FSS: *Nothing I can see. I did hear something about light snow showers up above Snowbird but that's quite a bit north. Hold on, Knoxville's latest just came up. Okay, 8,000 scattered, measured ceiling 12,000 overcast, visibility eight miles. Don't see any mention of snow.*

Pilot: *Sounds good to me.*

FSS: *I don't think you'd have any trouble if you're leaving right away.*

Pilot: *All right, thanks.*

FSS: *Have a good one, sir.*

But when he drove home to pick up his family there were the inevitable delays in rounding up the children and all their Christmas packages, so that it was approximately 5 p.m. before they reached the airport. The sky was already nearly dark but clear. The pilot decided he could shave off about half an hour of flying time by following the Sugarloaf 250° radial to Harris, instead of dog-legging around by way of Toccoa.

The more direct route led over the southern tip of the Appalachians, with a minimum en route clearance of 6,600', but he planned to fly at 8,500 so he anticipated no difficulty. At 6:10 he was able to identify Thorpe Lake nestled in the mountain valley below him, and he switched over to the Harris VOR, now less than 50 miles away.

A few minutes later he was surprised to see a few snowflakes hitting his windshield. Even though it appeared to be no more than a flurry, he was concerned because he had no winter flying experience, and he knew the *Saratoga* was not equipped with de-icing gear. He observed that the sky had become completely overcast.

Worried about getting into clouds, he descended to 6,500' and discovered his VOR signal reception was erratic, presumably because of terrain interference. The needle kept swinging and the flag kept flipping on and off. Snow was beginning to stick to the windshield, and the pilot did not want to climb again and lose ground reference in the deteriorating visibility. Looking out the window off to his right he saw a glow of light which he realized must be the town of Franklin in the valley of the Little Tennessee River. He decided to head for the town and attempt to locate the airport.

Directly over the town, where the glow of green and red lights were suffused through light but steadily falling snow, he attempted to contact the airport UNICOM but received no reply. He realized that airports in this area generally closed at sundown, so he gave up on the radio and began to follow the highway that led out of town in a southwesterly direction, hoping that it would bring him out of the mountainous area and snow showers. The road led through a fairly narrow and steep-sided valley, and the visibility was so poor that he had no certain idea of how far he was from the slopes. He decided to put the airplane down on the first open stretch of ground or virtually deserted highway at the first opportunity.

The road turned sharply to the left, and as he came around the bend he saw a parallel string of white lights, interspersed with a few red and

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green ones, on what he first thought was a snow-covered meadow, but later realized was a runway. He lined his airplane up with the lights, told his wife to make sure the girls were buckled in to their seats, and headed straight in. Snow was collecting on his windshield and interfering with his forward visibility, but the lights gave him enough reference to the ground to achieve a hard, multi-bounce landing that culminated in the collapse of the nose gear.

The pilot and his wife grabbed the children and scrambled quickly from the airplane, but there was no fire, and miraculously no one was injured. They walked to the airport office, which was closed, but not locked. They were found huddled around the still-warm wood stove by the airport manager, who drove back from home after hearing the low flying airplane come down. He explained that he always left the runway lights on for Christmas Eve—just in case someone needed them.

Failure to obtain an adequate weather briefing—the essential cause of this near tragedy—has been studied in a recent National Transportation Safety Board report. Safety Board meteorologists studied 72 weather-related accidents in 1980 and found that in one out of every 12 accidents an incomplete briefing was a cause or factor of the accident. Such accidents may be prevented if the pilot knows what is available to him and how to make certain what he gets is the whole picture.

In the incident above, for example, the pilot had requested and received a full briefing when he called at 8 a.m., but when he called again at 3 p.m. he asked only for destination weather and for certain en route reports. More importantly he changed his route without informing the briefer and did not get an update on the area forecast, which had been amended earlier to predict scattered snow showers over the mountains after 6 p.m. The FSS specialist gave him the information he thought was pertinent to his original route.

Each FSS weather briefer has a wealth of data at his disposal but normally it is impractical for him to pass all of it on verbatim to a pilot—this could take 15 or 20 minutes and much of it would not be relevant. The briefer is trained to interpret weather data according to the needs of the traveler and his capability. But if a pilot asks only for current weather at a specific airport, that may be all he will get, as the briefer may assume he already has received all other pertinent information.

Ideally the briefer who has been asked for a complete briefing would like to hear:

- **Aircraft number and type.** The number should be given in full to avoid mis-identification with similar numbers. The aircraft type is important because it indicates altitudes and routes, as well as ability to cope with turbulence, icing, etc.
- **Type of flight.** If VFR, should indicate whether the pilot is capable of going IFR, and experience (if student, low timer or not current).
- **Departure point** (or current position) and **destination**.
- **Proposed route and altitudes.**

The North Carolina pilot would not have put a crimp in his holiday plans had he called flight service and said something like this:

"One three niner foxtrot, PA-32 *Saratoga*, low-time private pilot, VFR only, departing Rutherford County 5:15. Destination Crossville, TN by way of Sugarloaf and Harris VORs. Cruising at 8,500. ETA 6:40. I'd like departure and destination reports, forecasts if amended since 8 a.m., winds aloft at 9,000 and any PIREPS or flight advisories for my route."

Such a request would have probably elicited information regarding the snow showers forecast for early evening, although the route as proposed avoided the mountains. For greater safety the pilot should have checked the weather again before altering his route at night.

Given the proper information from a pilot, the briefer is expected to respond with the following:

- **Adverse conditions.** Any significant meteorological and aeronautical information which might influence the pilot to alter his route, such as the possibility of hazardous weather or runway closings.
- **Recommendation for VFR flight.** The specialist will describe actual or forecast conditions, then indicate "VFR flight no problem" or VFR flight not recommended."
- **A synopsis.** Systems causing the weather that will affect the flight.
- **Current reports.** Observations for departure, en route, and destination airports—provided the estimated time of departure is within two hours of the time of the briefing.
- **Forecasts.** Terminal and area forecasts.
- **Winds aloft** (in range of proposed flight altitudes).
- **Advisories.** Any other pertinent information the briefer feels is important for the flight or the pilot asks for.

If the pilot does not receive at least this much information, he should ask for it. If he does not understand any part of it, ask to have it explained. Furthermore, weather along a particular route may not be available, either because the reporting station has closed down for the day or the hourly report is not in yet, or no station exists there. When this is the case, the receipt of a good weather briefing is more important because it is up to the pilot to compare area and terminal forecasts and reports and come up with his own "forecast" for his route.

Having all available weather information *immediately* prior to a flight is the only way (other than not going at all) to keep from getting caught in adverse weather. If departure time is delayed for more than an hour an updated briefing may be appropriate, especially for a night flight. A short additional delay on the ground is better than a long search in the dark for a lighted patch of ground.

Christmas does come but once a year. ■

(Certain details of the accident included in this article were changed to protect the anonymity of those involved.)

Private Pilots and Public Use Airports

"An airport owner or operator can be held responsible for at least correcting the defects that he happens to know are there. Nevertheless, it may not be difficult for a skillful lawyer in defense of the airport to show that the pilot has a duty to exercise due care to see what can be seen and to know what can be learned about the conditions ahead."

Michael J. Pangia Chief, Litigation Division, FAA

By midafternoon on December 9 it begins to get dark at Cordova, a coastal mining town on the Gulf of Alaska, and the airport lights were clearly visible as the B-727 air carrier lined up for a straight-in approach to Runway 27. The landing was routine up to the point of touchdown, when the captain caught sight of an "antlered object" in the glare of his landing lights. "Hey," he called out, "there's a deer out there, a bloody reindeer." "Little early for Santa," the copilot started to joke, and just then there was a heavy thump up front, the nose gear sagged, and the jet shuddered to a premature halt off the runway.

No one aboard the aircraft was injured or even inconvenienced beyond a short wait for an airport vehicle to transport everyone to the terminal building. The "antlered object" turned out to be a 2,000 lb. bull moose, who had mounted his last charge. In the spirit of the season, free moose steaks were offered to the delayed passengers, while a replacement aircraft was flown in from Anchorage.

However, there was nothing Christmasy about the spirited litigation that followed, concerning who was responsible for the $300,000 bill for repairs to the 727—the aircrew, the FAA or the airport management. The investigation by the National Transportation Safety Board included a historical review of the runway environment.

Runway 27 at Cordova had been recently extended from 4,730' to 7,500' in order to accommodate air carrier aircraft. The sides and end of the original runway had been ditched to discourage wild animals from straying over it. But the runway extention had been built over the site of a long established moose trail and no protective barrier of any kind had been built. Driven by instinct the moose continued to use their trail, even though a portion of it had been hard surfaced. Pilots who flew into Cordova regularly, the including B-727 crew, had been cautioned about the presence of the animals in the area.

Investigators concluded that because of high brush and scrub trees growing around the runway, plus the lack of daylight, the 727 crew could not have seen the moose on the runway from the air, no matter how diligently they had looked. The captain had applied brakes and thust reversers as soon as the approaching moose had been sighted, and no other evasive procedure could have been recommended under the circumstances.

The airport at Cordova has no control tower, but a flight service station is located on the field and the FSS had undertaken to patrol the runway by car before the arrival of scheduled air carriers, to make certain it was free of animals or other hazards to aircraft. Such a patrol had been carried out about one hour prior to the 727's arrival, and nothing amiss had been noted. Manpower limitations would have made it impossible for FSS personnel to conduct more frequent inspections of the runway.

The agency had asked that additional patrols be undertaken by airport personnel, and suggested other accident preventative measures, such as removing trees that blocked the view of FSS specialists, and fencing the runway extention. None of these measures had been carried out prior to the B-727 accident. An Alaska Superior Court judge determined that the airport's failure to act in the interests of air safety was the proximate cause of the accident when the airline brought suit for damages. The airport was found liable for the entire repair bill plus interest, also the value of the lost down time of the airplane, attorney fees and court costs. An appeal was unsuccessful.

The court ruling was in accordance with Federal Aviation Regulation Part 139.9, which states that management is responsible for ". . . identifying, assessing and disseminating . . . information to air carrier users . . .of its airport by Notices to Airmen or other means acceptable to the Administrator concerning conditions . . . that may affect the safe operation of aircraft." Notice that FAA obligates the airport to notify only air carriers of the moose hazard at Cordova. *What about general aviation pilots flying into an airport at night or in other conditions of obscured visibility:* who is required to warn them about invisible hazards such as wild animals on the runway, livestock fences, equipment left out overnight, etc?

No one. The general aviation pilot uses an airport at his own risk.

There is an implied measure of protection at airports where FAA publishes information on the airport on charts or in the Airport/Facility Directory. However, because phrases such as "land at your own risk," "caution," or "experienced pilots only" can be an attempt by airport operators to avoid legal responsibility, these will not appear in government publications. Even the presence of an FAA control tower or a flight service station at a general aviation airport does

Marking unusable runways with X prevents confusion. Local FAA offices will advise.

not change this risk. The primary purpose of these facilities is to provide air traffic separation and weather and navigation information. If FAA personnel become aware of other information that would be helpful to pilots with whom they are in contact they will relay that information as soon as their primary workloads permit. But the physical terrain of an airport—including runways, taxiways, ramps, etc.—is the property of the airport owners, and is maintained by and at owner direction.

FAA publishes recommended standards for the construction and maintenance of the physical plant of an airport, designs appropriate markings to indicate closures and other conditions, and broadcasts information of concern to airmen; but compliance with FAA standards or recommendations is enforceable only at federally certificated air carrier airports—and to a more limited extent at airports receiving federal grants for design and construction. These airports constitute only a small fraction of the more than 15,000 airports in the United States, which are not federally regulated in any way.

In most cases the federal government regards a general aviation airport manager as an entrepreneur offering certain services, at his own discretion, to users of aircraft. He is free to decide all such matters as length, width, surface condition and direction of runways, removal of snow, containment of wild or domestic animals or other hazards, provision of fuel or other services, landing fees, pattern altitudes and direction of flow, lighting, weather observations, UNICOM services, hours of operation and so forth.

Pilots who are used to the uniform standards of air traffic control across the nation may be predisposed to expect uniform standards of airport services, but this is misleading. In the main, airport managers are sincerely concerned about the pilots who use their field and accept a reasonable degree of responsibility for the safety of their landing facilities. Reasonable, however, does not mean the same thing to the manager who is operating in the red as it does to someone operating in the black. Airports need users but they also have to pay the help and the rent and the utility bills in order to keep operating. Potholes or snowdrifts may have to remain on site a little longer then desired. If a runway becomes unusable and there are not funds to have an X marked on it or no time to file a NOTAM, the airport manager may just count on the pilot's good judgement for avoiding broken ground.

He may reason, logically enough, that the pilot in command of an aircraft is not obliged to land at any particular facility, barring an emergency. And he may know that in the eyes of FAA a pilot is always ultimately responsible for the decisions he makes regarding his own safety and that of his passengers. If a pilot cannot be certain, as a result of telephone or radio inquiry, or personal inspection, that a runway is safe to use, he has no basis for assuming so simply because he has not been informed otherwise. Better to assume, until you know better, that every strange airport you approach is going to be some kind of Dogpatch International with zigzag runways and cavernous potholes. Bear in mind that if an accident does occur, and litigation takes place, local feeling and custom may override any strict interpretation of the Federal Aviation Regulations, as witness the following example.

The accident occurred in Central Kansas on May 25, following an attempted unscheduled landing on a sod strip that was soggy from recent rains and overgrown with tall grass. The aircraft was a *Bonanza* K-35, occupied by four business associates who were flying VFR from El Paso, TX to Lincoln, NB. A fueling and weather briefing stop was made in midafternoon at Russell, KS. The sky was clear, temperature 78°, wind 12 knots at 120°, gusting to 18. Without making any changes in his flight plan the pilot reboarded his passengers and departed Russell Airport at 4:04 p.m. A few minutes later the aircraft was observed flying low near the Wilson Reservoir Airport.

Wilson has a 2,700′ north/south grass strip located to the north of the reservoir. At the south end of the strip there is a sharp drop of nine feet, to a plateau approximately 100′ long, with barbed wire fence at the southern edge guarding a steep slope leading down to the reservoir. Rainfall at the airport in the amount of 3.23

All that beckons in the countryside is not solid sod. An overflight for inspection, if the field is unattended, helps avoid soggy surprises.

inches had been recorded within the previous five days, resulting in a very soggy surface, although the condition would have been difficult to ascertain from the air because of the waist-high grass.

Witnesses on the ground saw the *Bonanza* touch down on the grass and then, without coming to a stop, continue on down the runway with full power, as if preparing to take off again. On reaching the end of the available runway the airplane was not fully airborne, and its tail bumped the ground as the pilot tried to rotate. The aircraft was seen to crash through a barbed wire fence at the runway's end and remain airborne for about 200 feet before banking sharply left and starting a turn toward the northwest. A turn of nearly 180° was completed before the plane nosed down, crashed, and burst into flames. All four persons on board died in the fire.

The official investigation attributed the accident to pilot error, (selected unsuitable terrain, delayed in initiating go-around, failed to maintain flying speed) and their findings accorded with the statements of several witnesses to the unfortunate accident. The pilot's decision to land at Wilson Reservoir was apparently made on the spur of the moment, with no check having been made with the FSS or other facility regarding the condition of the small grass strip, which was unattended. He did not overfly the field before landing to inspect the runway. He did not communicate his intentions before going down. He landed long, touching down almost 1,200 feet beyond the threshold.

Apparently he made a decision to take off at once without considering whether the remaining runway, given the soft muddy conditions he was experiencing, was sufficient to enable him to become airborne. (The *Bonanza* required 1,300 feet of *dry* paved runway for takeoff, but at least approximately 2,000 feet under existing conditions.)

Heirs of the three deceased passengers sued the pilot's estate for damages in the county court of Lincoln, NB, the pilot's home city. Judgements amounting to over $100,000 were awarded.

Five years later a similar sum was awarded to the late pilot's insurance carrier as a result of a suit filed in a Kansas District Court. The court found that the airport proprietor (U.S. Army Corps of Engineers) was negligent because ". . . the operator of an airport open to the public is under a duty to warn potential users thereof of any unsafe conditions." The pilot, the judge stated, enjoyed the status of a "public invitee" and the airport "owed him the duty of exercising ordinary care for his safety and the safety of his passengers."

Specifically the court found the Corps of Engineers and its employees negligent because it "failed to control the height of the grass," and failed "to physically mark the airport to indicate its unsafe condition for persons contemplating landing thereon."

The court also found that FAA was negligent in failing to ascertain the unsafe conditions of the field, and to issue a warning to pilots.

In this case the statutes and case law of the state concerning airport responsibilities overrode all other considerations, including the findings of the National Transportation Safety Board.

The capability of FAA to be informed continuously of runway conditions at the more than 15,000 airports in the country is much exaggerated in the minds of airport users and the general public. The agency, as noted earlier, simply does not have the authority to compel general aviation airport owners to report unsafe conditions; nor the manpower to inspect all airports unless state aviation agencies help out. Also, only public use airports (less than half of all airports) are subject to inspection. The remaining 8,500 airports are classified as private or restricted in part to avoid liability.

The radio facilities of FAA's air traffic control system will include Notice to Airmen (often attached to terminal forecasts). An FSS specialist will seek out any pertinent NOTAMS for pilots who ask for them, but the NOTAM itself must be filed with the nearest Flight Service Station—or FAA facility, with a request that it be relayed to the FSS for dissemination.

Even where a control tower is located at an airport, controllers are not always in a position to observe runway conditions, particularly at night or in stormy conditions. The tower will provide pilots with a runway condition report, in accordance with their observations, plus reports of users and a periodic field condition report from the airport manager—when that has been provided.

Pilots should realize that the tower is usually not in a position to fully verify reports provided by other sources. Anticipate the possibility that conditions may have worsened since the latest report was filed. Always use caution when operating in conditions of poor visibility. A runway that has been cleanly plowed of snow, for example, can be covered up again with a layer of several inches very quickly with the centerline obscured, if it is windy and the snow is dry. Braking conditions reported as "fair" by a heavy jet aircraft may be characterized as "poor" by a much lighter jet or other highspeed general aviation aircraft.

Courts in most of the United States appear disposed to place the major share of the responsibility on the airport owner for providing safe conditions for aircraft use, and for cautioning pilots about any possible hazards to flight. However, although he may be adjudged to be in the wrong, the airport manager is seldom in jeopardy of physical harm—as the pilot is. No amount of financial settlement, however generous, will bring a deceased pilot or his passengers back to life. For a pilot operating at an unfamiliar airport or in conditions of restricted visibility, the moot question is not who is right or wrong from a legal standpoint, but is he taking something for granted unnecessarily?

That can really hurt. ■

COURT FINDINGS

Courts in various states have found airports liable for aircraft accident costs attributed to:

- Closing of a runway without notification
- Machinery near the runway
- Construction or alteration without notice
- Inadequate snow removal
- Non-standard or inadequate lighting
- Deteriorating surfaces
- Inadequate fire or rescue capability
- Poor drainage
- Untrained line or maintenance personnel
- Uncut brush or grass
- Surface vehicles on runway

Two useful and much read pamphlets of interest to airport owners are Advisory Circular 150/5340-E, "Marking of Paved Areas on Airports," and Advisory Circular 150/5200-23, "Airport Snow and Ice Removal." Both are available without charge from the Department of Transportation Publications Section, M 443.1, Washington, DC 20590.

The Appalachian Aerial Express

According to a reliable West Virginia source, the mountain state has more land area than any state in the Union—if you could flatten it out!

With this kind of terrain, it is not surprising that West Virginia had little attraction for early pilots. Only 23 airports were located in the entire state in the mid-1930's and only two of them had scheduled airline and airmail service. The remainder of the state's mail was carried slowly and laboriously by post office vehicles that often stalled on the steep mountain roads, delaying delivery for days or weeks. The idea of a regular intrastate airmail service was considered impractical until a California dental surgeon named L.S. Adams decided to modernize the old tried-and-true method of railroad mail pick-up. Since the Civil War, trains had been able to pick up mail bags from a hook suspended over the tracks without stopping or even slowing down.

Adams, who had become interested in aviation in 1910 through his friendship with Glenn Curtiss, theorized that if a train could do it, so could a plane—with some modifications. His design was for two 30-foot steel poles to be placed upright in the ground 60 feet apart. A mailbag would be attached to a large loop of rope. Part of the rope would be stretched tautly between the two poles while the bag sat on the ground. A pilot would make a low pass, trailing a cable with a four-finger grappling hook, and snatch the taut rope. The rope and dangling mailbag would then be reeled in by a second person on the plane.

Adams eventually gave up his dental practice to devote all his time and money to proving an inflight mail pick-up could be done. His first opportunity to demonstrate his idea came in 1927 in New York City when an aircraft using his device dropped off and then picked up mail from a ship at sea (the U.S.S. *Leviathan*).

In 1935 a West Virginia congressman and aviation enthusiast, Jennings Randolph (now Senator) heard of Adams' experiments and thought this would be the answer for better mail service for his constituents. He invited Dr. Adams to demonstrate the pick-up to him and a crowd of 7,000 interested onlookers at Morgantown, WV. The test at Morgantown airport proved successful and Randolph began urging Congress to fund the establishment of a pick-up airmail service for remote sections of the central Appalachians.

After much debate, approval was received and an experimental route stretching from western Pennsylvania through West Virginia to eastern Ohio was proposed. In May 1939, then, the Post Office Department called for bids for the new airmail service. There was but one response—from All American Aviation, and who won by default.

All American Aviation, or "Triple A" (later Allegheny Airlines and finally USAir) had been founded that same year by Richard DuPont, a former American glider champion.

He knew that the terrain his new service would be flying over was known by pilots as "Hell's Stretch" or the "Aviator's Graveyard" and had claimed the lives of more airman than any other similar area in the world. To make the pick-up service work, he could not afford costly accidents, so he decided to make sure he had the best pilots available.

His requirements were some of the strictest of any carrier of the day—a minimum of 4,000 hours and 10 years' flying experience. The seven pilots would also have had to be familiar with the area, and preferably be a native.

Next, a route of 55 towns over the three states was devised and pick-up points at each selected. Because of the notorious ground fog in low areas, high pastures, public parks, golf courses, and even cemeteries were chosen. With the airplanes purchased, pilots hired, and the logistics worked out, the service was inaugurated May 12, 1939. Three "Triple A" Stinson *Reliants*, painted a distinctive scarlet, began the service at Latrobe, PA.

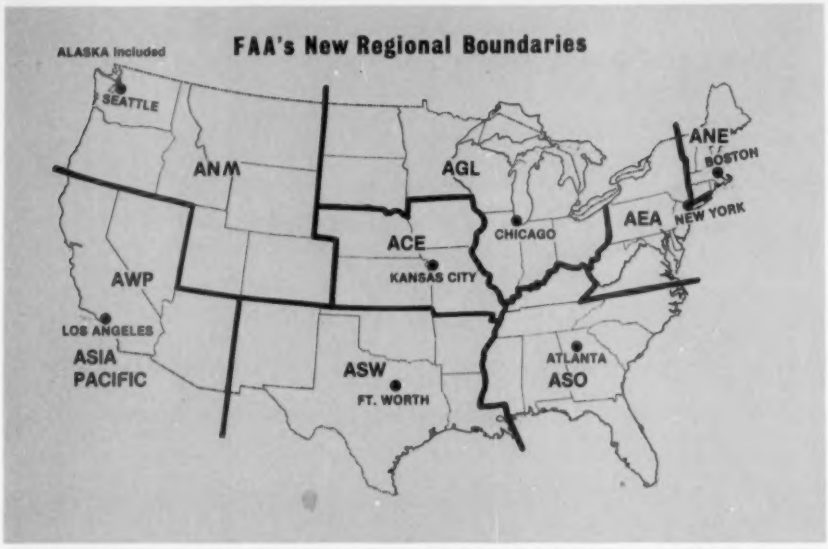
The pick-up airmail service became a unique experience in blind flying. There were no specific weather minimums established, either by the government or the company. As long as the pilot flew during daylight hours and stayed within eye contact of the ground, he decided his own personal minimums. There were few, if any, navigation aids in those days, and low ceilings and poor visibility were standard weather features for the area.

Nevertheless, the new service was a success—much to the surprise of the skeptics who had called it a waste of taxpayers' money or who had scoffed at Adams as an eccentric. During its first year, Triple A made over 23,000 pick ups along its route and lifted 75,000 pounds of mail, plus an additional 6,500 pounds of air express packages and cargo—including delivery of fresh fish from the Chesapeake Bay to "landlubbers" in the mountains. Weather continued to harass conventional air mail service, but the Triple A pick-ups managed to complete 93% of their scheduled daily runs.

By 1949 the pick-up service had been expanded to 139 towns and had enjoyed a decade with no serious accidents to mar its record. However, the service was becoming obsolete. With the development of radar and other navigation aids during World War II, instrument flying and scheduled landings in mountainous terrain became commonplace. The flashy red *Stinsons* trailing their cable hooks were no longer needed.

The pick-up principle refused to die although Triple A moved on to eventually carry paying passengers as well as cargo and airmail in the conventional manner. With a few military modifications the pick-up concept was used in war zones to retrieve troops and cargo gliders from remote areas that had no landing strips. Even today a more refined system is still being used by Air Force helicopters to retrieve data capsules parachuted from satellites. Also, a human retrieval system, similar to Dr. Adams' original idea but employing helium balloons to hold the snag rope is a common technique for rescuing downed airmen, especially at sea.

Could be that it will catch on for the space shuttle, too. ■



NEW ALIGNMENT. The FAA regions have a new look after some consolidation and switching of boundaries. North and South Dakota are now administered by the Great Lakes Region with headquarters in Chicago. The Rocky Mountain Region has been merged with the Northwest Region, headquarters in Seattle. And the Pacific-Asia is in the Western Region, headquarters at Los Angeles. Regional offices in Honolulu and Denver are being closed and their functions transferred. All other FAA offices in the regions will remain open under the new alignment, and there will be no change in services to airmen.

Flexible Minimum Equipment Rule Open for Comment

General aviation pilots may no longer have to spend seemingly endless hours on the ground waiting for equipment repairs if that inoperative item does not necessarily make the aircraft unairworthy. FAA has published a notice of proposed rule making to amend Part 91.30 ("Inoperative Equipment and Instruments for Multiengine Aircraft") which would make it applicable to all Part 91 aircraft and effectively establish Minimum Equipment Lists for Part 91 operators, similar to those used by air carriers.

Currently, Part 91 aircraft can only be operated legally if *all* equipment and instruments described in the type certification are operative. This means that an aircraft with an inoperative navigation light, for example, would be considered unairworthy and could not be flown legally even on a VFR day flight.

Under the proposed rule, Part 91 operators of large aircraft (greater than 12,500 lbs.) who already have a master minimum equipment list, formulated by FAA and industry specialists, could develop an MEL that would permit flight with specified instruments or equipment inoperative. This would eliminate the need for application for an exemption for each flight when "unnecessary" or redundant equipment has failed. Once the MEL is approved by FAA, it would then have to be carried in the aircraft and made available to the pilot.

For smaller aircraft which do not have a master MEL the FAA-approved flight manual would be revised to list instruments and equipment which may be inoperative without rendering the aircraft unairworthy. The proposed rule change would make it possible to add various items to this "optional" list upon application to the local FAA flight standards district office.

Older aircraft that have neither a master MEL or an approved flight manual would also benefit from the proposed new rule if the operator developed an operating limitations statement (to be approved by FAA) that lists equipment, instruments, etc. that would not be necessary for a particular operation of that aircraft.

In any case, "missing" equipment would have to be noted in the aircraft log, which must be available to the pilot for each flight.

Copies of the NPRM can be obtained free from the FAA Office of Public Affairs, APA–430, 800 Independence Ave., S.W., Washington, DC, 20591. Comments should be sent no later than January 25, 1982 to FAA Office of the Chief Counsel, AGC–204, Docket No. 22320, same street address.

N-Numbers Return to 12 Inches

After a four year experiment with three-inch N numbers on aircraft, FAA has ruled in favor of returning to twelve inch numbers. Aircraft manufactured after January 1, 1983, will have to display the larger numbers. All other aircraft will have to switch back to larger numbers at the next repainting.

Difficulty in reading the three-inch numbers has caused difficulties for controllers in visually identifying aircraft, and has also caused problems with enforcement of violations, or apprehension of drug smugglers.

Aircraft classified as exhibition, antique (built at least 30 years ago), unusually configured, or experimental may continue to use three-inch identifiers.

Top Instructor, Mechanic Awards

A pioneer in powerplant/airplane modification and a flight instructor who believes in introducing "controlled stress" into the training cockpit received the 1981 industry awards for Aviation Maintenance Technician and Flight Instructor of the Year, presented in October at a ceremony at FAA headquarters in Washington, DC.

John L. King, a shop foreman for Marsh Aviation Company in Mesa, AZ, increased the payload capability of the Rockwell *Thrush* ag plane by 25% when he installed a Garrett SR2 turboprop engine in the place of the heavier standard piston engine.

Fred H. Atkinson, a flight instructor from St. Clair, MO, has been teaching flying for 40 years and never had a single serious accident reported by his students. Atkinson believes in imposing unexpected inflight problems on his students during dual training in order to develop self-confidence at the controls.

Both men received plaques and cash honorariums worth approximately $4,000 from the general aviation industry, plus a three-day trip to Washington, DC sponsored by AOPA, the General Aviation Manufacturers Association, and the National Business Aircraft Association.

LONGEST FLIGHT EVER. The 27-story tall *Double-Eagle V*, a helium balloon with a four-man crew conquered the Pacific Ocean, a four-day, 6,000-mile trip from Japan to California last month. Storms forced a rough landing near Ukiah, CA. Captain Ben Abruzzo had previously piloted *Double-Eagle II* to the first balloon crossing of the Atlantic in 1978.

• Wooden *Vega*

I enjoy reading the Famous Flights page, but I found an error in the flying wing story (September/October 1981). Let me assure you that the first *Vegas* created by John Northrop and built by Lockheed were *all wood* wings, fuselage, and empennage. Only near the end of the line was metal used for the *Vega*, and then for only a few.

Charles Hayes
Park Forest, IL

• Frozen Ailerons

I thought this might make a good reminder now that the freezing season has set in again. I had not flown my Cessna 150 for a couple of weeks, and after a too-hasty preflight (due to the cold), I started the engine and began taxiing. As an afterthought, I checked the movement of the controls and found I could get no movement whatsoever from the ailerons. I shut down, got out, and tried moving them by hand without success.

What had happened was a heavy rain, followed by a quick freeze. The water had not completely drained out of the belly holes when the freeze hit and plugged the aileron cable mechanism. I had to have a mechanic free the restriction before I could think about flying.

I believe all too often we go through a preflight with a casual or hurried attitude for one reason or another—we're cold or wet or we never expect to find anything wrong anyway. This was the first control jam I had had in 21,000 hours of flying.

For me, it's back to a thorough hands-on walkaround.

John T. Wilson
Tilton, NH

Amen.

• Spinning the Instructor

I have some questions regarding the flight instructor certification process. Is a CFI applicant required to demonstrate a spin on the flight test? Does he have to have a log-book entry endorsed by a CFI attesting to spin competency? The Flight Instructor Practical Test Guide (AC 61–58A) refers to the applicant being asked to demonstrate the recognition and recovery from a spin situation. What is meant by "spin situation?"

Larry Williams
Murfreesboro, TN

During the flight test, the CFI applicant may or may not be asked to demonstrate he is capable of recognizing and recovering from a spin. In place of a demonstration of spin competency, the examiner will rely on a log-book endorsement that the applicant is capable of recognizing and recovering from spins. A "spin situation" can be described as the examiner putting the aircraft into an attitude that could lead to a spin and expecting the applicant to recognize and recover.

• Multi-Engine Instruction

Is there any way a non-multiengine rated pilot sitting in the right seat of a piston twin, less than 12,500 lbs., can log time toward a certificate or rating if the pilot occupying the left seat is a CFI single-engine only, but multi-engine rated?

Steven A. Briner
Ruston, LA

Negative, if your intention was to count the time toward a certificate or rating or to meet currency requirements.

• Cheap Runway Labor?

I have just finished your September/October 1981 issue and found the articles most interesting. One thought came to mind when reading "Landing Images." You indicate that FAA tries to keep runway slope at 2° or less either way. Since I believe that the Caroline Islands are a U.S. Protectorate, that runway at Yap exceeds FAA specifications many times over. I know after a tour of duty in the U.S. Navy in that part of the world that manual labor is very inexpensive and most natives enjoy the opportunity of gainful employment. Why not put them to good use? By the way, I really enjoy your publication.

Ed Lopez
Newhall, CA

The runway at Yap where the jet crashed was originally a military base during World War II, and not intended for permanent use. A new commercial airport—with level runways—is being constructed nearby.

• Shock Trauma Centers

After a plane crash in early October, my brother Richard Pratt was taken to the University of Maryland Shock Trauma Center. This facility supplied my brother with superb medical attention, but unfortunately, his injuries were too massive to sustain him. Are there many such centers across the United States? If so, is there anything that can be done to help support their efforts?

June Pratt Clark
New Canaan, CT

Yes, there are shock trauma centers in most metropolitan areas that treat persons severely injured in any sort of serious accident. Those requiring the special intensive attention these centers give may sometimes deplete the blood supply, and they greatly appreciate volunteer donations of all types of blood to replenish their stock.

• Logbook Correction

In several issues of the "Forum" you have stated that a pilot with a private or better certification can log instruction as both dual and PIC time, provided he is rated in the airplane and current. I have been taking commercial instruction and logging it only as dual. I would like to make an entry in my log to correct this error. How do I go about it?

C.S. Wright
Kingwood, TX

There is no error. Simply log the dual time that you were sole manipulator of the controls in the PIC column.

• The PATCO Mutiny

I have been asked to act as spokesman for a group of about 40 pilots in and around the Houston, TX area. Since the *FAA General Aviation News* is sort of an in-house publication, too, we thought it would be a good place to express our gratitude to the controllers who stayed on the job after the Patco Mutiny. The IFR community has never had it so good, and we now hear nothing but a very efficient and professional voice on every transmission. Thanks, again, guys and gals, we all appreciate a good job done better.

Pete Howard
Houston, TX

• ATP Crosscountry

In relation to an answer you gave in the September/October 1981 "Forum," regarding crosscountry mileage distance, you responded by stating that 50 Nmi is the minimum to apply towards certificates or ratings. Isn't this true except for the Airline Transport Pilot certificate? When applying for an ATP doesn't any flight between two airports, no matter what the distance between them, get counted as crosscountry time?

Frank Grippi
Daytona Beach, FL

Affirmative. According to FAR 61.155, an applicant for an ATP certificate must have at least 500 hours of crosscountry time, of which 100 hours is as PIC. The leg distance is not specified as it is for private or commercial certificates.

FAA GENERAL AVIATION NEWS welcomes comments from our readers. No anonymous letters will be used, but names will be withheld on request. Address: FAA GENERAL AVIATION NEWS, AFO-807, Washington, D.C. 20591.

• Night Fatigue Accident

I thought the "Night Fatigue" article in the September/October 1981 issue was very timely and interesting. However, there is one slight error. On p. 7 you refer to the pilot of a BE–8 (which subsequently crashed, fatal to four) being "on call at the airport" after several hours of flying. I work for the same company, and I know this was not the case. The pilot had gone home and was called out of bed for the flight that led to the accident. I just wanted to clarify this.

John Brower
Grand Rapids, MI

The information that the pilot had gone home to rest was not included in the accident report. We regret the error.

• Beachey's Bridge

I am compelled to correct your article on Lincoln Beachey in the January/February 1981 issue. The bridge Beachey is pictured flying under was the "Upper Steel Arch Bridge," also known as the "Fallsview Bridge" and the "Honeymoon Bridge" and not a suspension bridge as the caption indicated. When it was completed in 1898 it was the largest steel arch in the world. It was destroyed in an ice-jam in 1938.

John D. Waugh
Edgewood, MD

Thank you for the correction. The photo was evidently mis-labelled.

• Location Identifiers

Just finished the September/October 1981 issue and had a few general comments. First of all, thanks for the explanation of TCAS. I am inclined to regard as "famous last words," however, the statement, "It is not planned to be mandatory." Let's hope I'm wrong.

Bravo to the "Forum" editor! The item "Mincing Words" was a delight.

Was the photo on p. 3 ("Airborne Roller Coaster") reversed? If not, what does the first "W" stand for?

Finally, where can one get a list of all the airport identifiers?

Newton W. Miller
Redlands, CA

Thank you for the kind words. Yes, the photo of the aircraft on p. 3 was reversed, so the "W" at the end of the tail number became the beginning. To obtain a copy of the publication known as "Location Identifiers," send check or money order to Superintendent of Documents, U.S. Government Printing Office, Washington, DC, 20402. A year's subscription to the book with updates and changes costs $26, subject to change without notice.

• More on Fatigue

Your article entitled "Night Fatigue" in the September/October 1981 issue is very enlightening. In addition to your article, I would like to suggest the book, "The Human Factors in Aircraft Accidents" by David Beaty. The chapter "On Being Tired" should be read by all pilots who continue to push themselves beyond their limits when flying.

Bert A. Clayton
Lincoln, AR

INSTRUMENT CORNER

• Bonanza Safety Pilot

A pilot friend and I cannot decide who is right. I am a private pilot ASEL, checked out in various single-engine Cessnas, all less than 200 hp. My friend says I could be his safety pilot while he is under the hood in his *Bonanza* because I am rated (single-engine land) and current. I say no because I am not fully qualified to act as PIC. Who is right?

Name withheld

You are.

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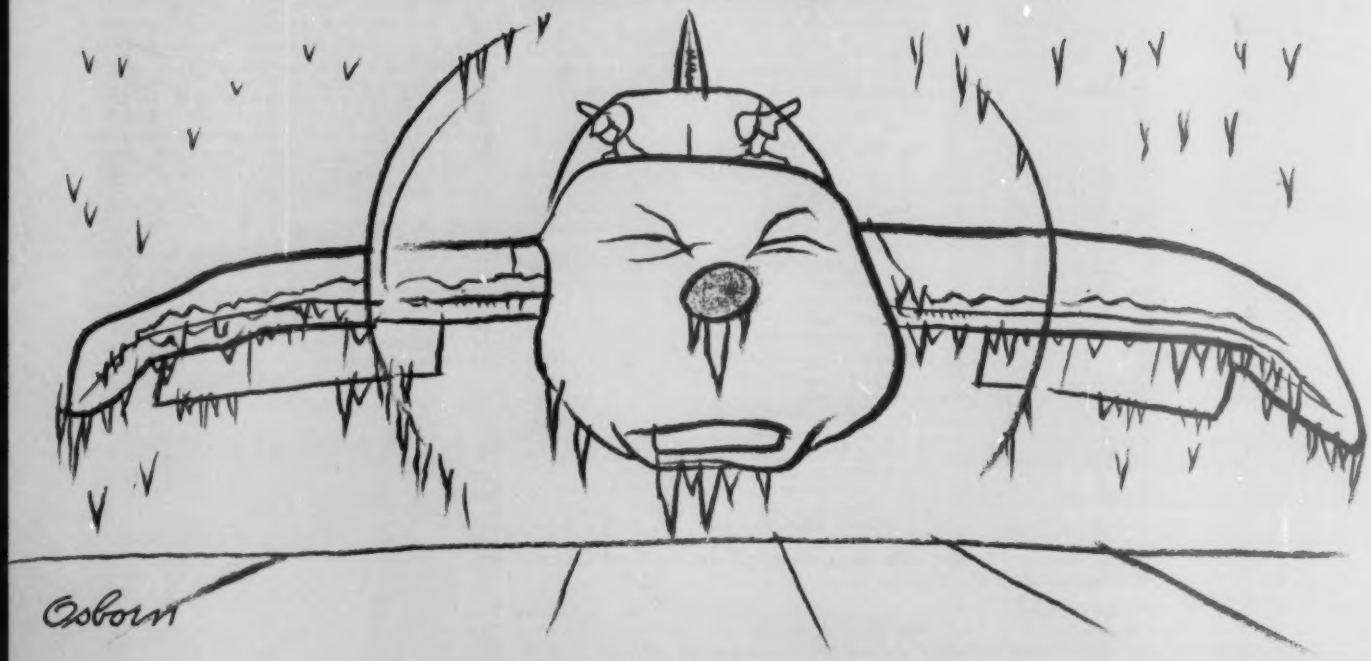
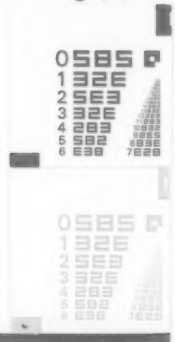


Just a tad over par—achew!

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